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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,888	06/25/2003	Szuping Lu	018940-023	2267

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,888	LU ET AL.	
	Examiner	Art Unit	
	Robert Sellers	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 19-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 and 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/29/2005</u> | 6) <input type="checkbox"/> Other: _____ |

This application contains claims 1-9 and 19-23 drawn to inventions nonelected with traverse in the non-Final rejection mailed August 24, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

1. The term “(meth)acrylate” denoted in claim 10 is interpreted as a methacrylate to distinguish the 2-ethylhexyl, cyclohexyl and isobornyl acrylates from their later listed methacrylates. The term is used as such to differentiate glycidyl acrylate and glycidyl methacrylate in the specification on page 3, paragraph 11, lines 6-7.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Nos. 5-171103 or 3-179067.

The rejection is maintained for the reasons of record set forth in the non-Final rejection. The arguments filed February 24, 2005 have been considered but are unpersuasive.

2. The claims are directed to a glycidyl (meth)acrylate based resin ***for a powder coating composition*** [emphasis added]” which is not an affirmative limitation requiring the composition to be a powder coating. Thus, the glycidyl (meth)acrylate resin can be present within any type of formulation such as the glycidyl methacrylate copolymer solutions of the Japanese patents.

There is no requirement for a powder coating comprising a glycidyl (meth)acrylate resin. More favorable consideration would be given to the limitation of independent claim 10 to a powder coating comprising the glycidyl (meth)acrylate resin.

Claims 10 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yabuta et al. Patent No. 6,313,221 in view of Japanese '067 and '103.

The rejection has been converted from a 35 U.S.C. 102(b) rejection due to the lack of exemplification of the claimed caprolactone (meth)acrylate of formula II and the certain species of ethylenically unsaturated monomers (c).

3. Yabuta et al. (col. 5, lines 9-14) discloses copolymers derived from glycidyl methacrylate in combination with Placel FM monomers (col. 5, lines 9-14, deemed to be within claimed formula II according to page 6, paragraph 26, line 5 of the specification) and other monomers such as methyl, ethyl, n-butyl or isobutyl acrylate (col. 5, lines 16-17). Copolymers derived from blends of glycidyl methacrylate, hydroxyl-containing monomers and various (meth)acrylates such as n-butyl and ethyl acrylate are exhibited in Tables 3 (col. 22) and 5 (cols. 26-27).
4. Japanese '103 attributes enhanced flexibility to the use of Placel FM monomers (page 4, paragraph 15) which are employed with glycidyl methacrylate and butyl acrylate.

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5. It would have been obvious to select a particular hydroxyl-containing monomer such as the Placel FM 1 or 2 of the Japanese patents to be copolymerized with the glycidyl methacrylate and n-butyl or ethyl acrylate of Yubata et al. in order to impart flexibility.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 12-14, 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Okazaki Patent No. 6,767,987.


6. Okazaki (col. 138, lines 1-6, Acrylic polyol resin (VIIA4) shows a copolymer having a number average molecular weight of 9700 prepared from 49.4 wt% of glycidyl methacrylate, 31.8 wt% of Placel FM 1 (col. 43, lines 11-13, a caprolactone-modified (meth)acrylate) and 32.6 wt% of butyl acrylate. Based on the amounts of glycidyl methacrylate within the limits of claim 17 and molecular weight embraced by the range of claim 12, the glycidyl methacrylate copolymer of Okazaki inherently possesses a glass transition temperature and epoxy equivalent weight within the parameters of claims 13 and 14, respectively.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki.

7. Although Acrylic polyol (VIIA4) contains 31.8 wt% of Placel FM 1 which is greater than the claimed maximum of 30 wt%, the teachings are not confined thereto. Column 97, lines 53-56 sets forth a general range of from 5-70 wt% of hydroxyl group-containing monomer which includes the Placel monomers according to column 43, lines 5-13. It would have been obvious to produce a glycidyl methacrylate copolymer with a content of Placel monomer within the disclosed concentration range as specifically indicated in Okazaki.

8. Shinohara et al. Patent No. 5,756,777 designated as a X reference in the International Search Report filed April 29, 2005 shows various copolymers containing Placel FM 1 and n-butyl acrylate (cols. 46-47, Table 1). However, the epoxy (meth)acrylates of Examples 10-16 in columns 31-36 do not conform to the claimed glycidyl (meth)acrylate monomer of formula I wherein R⁹ is a C₁₋₄ alkyl group and there are no methyl groups on the epoxide ring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



Robert Sellers
Primary Examiner
Art Unit 1712